

Application No.: 10/509,786
Amendment Dated: July 7, 2009
Reply to Office Action of: April 8, 2009

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.-7. (Cancelled).

8. (Currently Amended) A mail delivery device for use with a system including the Internet for delivering mail, the mail delivery device, connected to the Internet, for creating mail arrival notice to notify terminals of the arrival of said mail, a public network, connected to said mail delivery device, for relaying said mail arrival notice, and terminals, connected to said public network, for receiving said mail arrival notice, wherein:

said mail delivery device includes:

a mail receiver, connected to said Internet, for receiving said mail;

a mail storer, connected to said mail receiver, storing said received mail;

a mail transmitter, connected to said public network, for transmitting said received mail received by said mail receiver to said terminals through said public network;

a user data storer, provided separately from said mail storer, for storing data of a user of a transmission destination of said mail as user information;

a notice determiner, connected to said mail receiver and said user data storer, when storing of said mail terminates and mail information containing information about a transmission destination of said mail is inputted, for obtaining said user information from the user data storer and determining whether to perform said mail arrival notice;

a mail arrival noticer, connected to said notice determiner, for creating mail arrival notice based on a determination result from said notice determiner and said mail information;

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a transmission data storer, connected to said mail arrival noticer, for storing transmission data of said mail arrival notice; ~~and~~

a timer manager, connected to said notice determiner and said mail arrival noticer, for performing timer management for action timing of said notice determiner and said mail arrival noticer; and

a network connector, connected between said mail arrival noticer and said public network, for transmitting said mail arrival notice to said terminals;

said mail arrival noticer include:

a mail arrival notice creator, connected to said notice determiner and said user data storer, for creating said mail arrival notice from said mail and said user information;

a notice transmitter, connected to said mail arrival notice creator and said transmission data storer, for creating a transmission request of said mail arrival notice transmitted from said mail arrival notice creator and storing it in the transmission data storer;

a network connection controller, connected between said notice transmitter and said public network, for converting said transmission request into a format interpretable to said network connector;

a retransmission controller, connected to said notice transmitter and said timer manager, for creating a retransmission request of said mail arrival notice, which is a next transmission request in the case of failure of said transmission request; and

a retransmission data storer, connected to said retransmission controller, for storing retransmission data required to create a retransmission request, which is a next transmission request; and

a retransmission data deleter, connected to said notice transmitter and said retransmission data storer, for deleting said retransmission data within said retransmission data storer according to the transmission request of said notice transmitter;

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said mail arrival noticer, when mail arrival notice to said terminals fails, transmits said mail arrival notice again to said terminals after a predetermined time managed by said timer manager elapses, and when said mail arrival notice is successfully transmitted, deletes said mail arrival notice data from the transmission data storer device; and further,

said mail arrival noticer, when the mail receiver receives a receiving second mail for the same transmission destination as the transmission destination of first mail received previously on condition that a mail arrival notice for the first mail has failed and retransmission of the mail arrival notice therefore has not been performed by said mail receiver, temporarily stops transmission of a retransmission request for said first mail and formerly performs transmission of a mail arrival notice for said second mail,

said retransmission data deleter, when the mail arrival notice for said second mail succeeds, deletes said retransmission data for the same terminal within said retransmission data storer; and

said mail arrival noticer, when the mail arrival notice for said second mail formerly performed after temporarily stopping transmission of said retransmission request fails, cancels the stopping of transmission of said retransmission request for said first mail and performs retransmission of a mail arrival notice for said first mail.

9.-12. (Cancelled).

13. (Previously Presented) The mail delivery device according to claim 8, wherein said mail arrival noticer, when mail arrival notice for said second mail succeeds after temporarily stopping transmission of said retransmission request, delete all retransmission data for the same transmission destination.

14. (Previously Presented) The mail delivery device according to claim 8, wherein said mail arrival noticer, when receiving second mail for the same transmission destination as a transmission destination of first mail received previously by said mail receiver, deletes retransmission data for said first mail stored in said retransmission data storer.

15. (Previously Presented) The mail delivery device according to claim 8, wherein said mail arrival noticer, when mail arrival notice of said second mail fail, stores retransmission data for said second mail in said retransmission data storer.

16. (Previously Presented) The mail delivery device according to claim 8, wherein said mail arrival noticer sets said number of retransmissions of mail arrival notice.

17. (Previously Presented) The mail delivery device according to claim 8, wherein:

said mail arrival noticer includes a retransmission control table for storing correspondences between types of responses from said public network and next transmission processing methods;

said network connection controller sends a response of said public network to a transmission request of mail arrival notice created by said mail arrival notice creator to said notice transmitter;

said notice transmitter sends said response to said retransmission controller; said retransmission data storer stores, from said response and said retransmission control table, information required to create a retransmission request, which is a next transmission request in the case of failure of the transmission request; and

said retransmission controller creates said retransmission request.

18. (Previously Presented) The mail delivery device according to claim 8, wherein, in the case where a terminal user has plural terminals of different types, said mail arrival noticer registers information of the plural terminals of said user in said user data storer, and when mail arrives in the user, said mail arrival notice creator assigns priorities to said plural terminals and creates mail arrival notice.

19. (Previously Presented) The mail delivery device according to claim 18, wherein, when assigning priorities to said plural terminals, said mail arrival notice creator assigns transmission priorities to terminals of transmission destinations, based on one of

mail contents, notice conditions, and terminal capabilities, or combinations of two or more of these items.

20. (Previously Presented) The mail delivery device according to claim 18, wherein said mail arrival noticer has data of a table of correspondences between phone numbers of said plural terminals and information about charges for communications with said terminals, and assigns priorities to said plural terminals, using the information about charges for communications with said terminals.

21. (Previously Presented) The mail delivery device according to claim 18, wherein said mail arrival noticer has data of a table of correspondences between carriers of phone numbers and phone numbers of transmission destinations, and communication charges, and, when assigning priorities to said plural terminals, assigns the highest priority to a terminal having the lowest communication charge.

22. (Previously Presented) The mail delivery device according to claim 18, wherein, said mail arrival noticer, when said mail arrival notice is unsuccessfully transmitted, decides a terminal of a next transmission destination according to the transmission priorities of said terminals, and retransmits said mail arrival notice.

23. (Previously Presented) The mail delivery device according to claim 8, wherein, in the case where a terminal user has plural terminals of different types, said mail arrival noticer registers information of the plural terminals of said user in said user data storer, and when mail arrives in the user, said mail arrival notice creator creates contents of mail arrival notice in a format suited for a terminal of a transmission destination, based on one of mail contents, notice conditions, and terminal capabilities, or combinations of two or more of these items.

24. (Original) The mail delivery device according to claim 8, wherein, in the case where said terminals output a request to obtain containing the terminal capabilities of said terminals and notice conditions after receiving said mail arrival notice, the contents of said mail are created in a format suited for the transmission destination terminal, according to said terminal capabilities and said notice conditions.

25. (Previously Presented) The mail delivery device according to claim 8, wherein, in the case where a terminal user has plural terminals of different types, information of the plural terminals of said user is registered in said user data storer, and for at least some of the terminals, terminal information of transfer destination and transfer instructions are registered, the mail arrival noticer makes mail arrival notice to said some of the terminals, and transmits arriving mail to a terminal of transfer destination.

26. (Original) The mail delivery device according to claim 18, wherein, for at least some of plural terminals owned by a user, terminal information of transfer destination and transfer instructions are registered, and in the case where mail arrival is accompanied by mail arrival notice to said some of the terminals, arriving mail is transmitted to a terminal of transfer destination.

27. (Previously Presented) The mail delivery device according to claim 8, wherein said terminals have a transfer instruction function, and after receiving mail arrival notice, transmit transfer instructions and terminal information of transfer destination to the mail arrival noticer, and upon receipt of the transfer instructions, the mail arrival noticer transmits arriving mail to a terminal of transfer destination.

28.-29. (Cancelled).

30. (Previously Presented) The mail delivery device according to claim 8, wherein, in the case where said terminals output a request to obtain mail text without containing the terminal capabilities of said terminals and notice conditions after receiving said mail arrival notice, the mail transmitter, in response to the mail text acquisition request, obtains mail from the mail storer, obtains information of the terminal from the user data storer, and converts mail contents according to information thereof.